



SEQUENCE LISTING

<110> Chen, Lieping

<120> B7-H3 AND B7-H4, NOVEL IMMUNOREGULATORY
MOLECULES

<130> 07039-219001

<140> US 09/915,789

<141> 2001-07-26

<150> US 60/220,991

<151> 2000-07-27

<160> 23

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 316

<212> PRT

<213> Homo sapiens

<400> 1

Met	Leu	Arg	Arg	Arg	Gly	Ser	Pro	Gly	Met	Gly	Val	His	Val	Gly	Ala
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			20					25					30		
Val	Pro	Glu	Asp	Pro	Val	Val	Ala	Leu	Val	Gly	Thr	Asp	Ala	Thr	Leu
		35					40					45			
Cys	Cys	Ser	Phe	Ser	Pro	Glu	Pro	Gly	Phe	Ser	Leu	Ala	Gln	Leu	Asn
	50					55					60				
Leu	Ile	Trp	Gln	Leu	Thr	Asp	Thr	Lys	Gln	Leu	Val	His	Ser	Phe	Ala
65					70					75					80
Glu	Gly	Gln	Asp	Gln	Gly	Ser	Ala	Tyr	Ala	Asn	Arg	Thr	Ala	Leu	Phe
				85					90					95	
Pro	Asp	Leu	Leu	Ala	Gln	Gly	Asn	Ala	Ser	Leu	Arg	Leu	Gln	Arg	Val
			100					105					110		
Arg	Val	Ala	Asp	Glu	Gly	Ser	Phe	Thr	Cys	Phe	Val	Ser	Ile	Arg	Asp
		115					120						125		
Phe	Gly	Ser	Ala	Ala	Val	Ser	Leu	Gln	Val	Ala	Ala	Pro	Tyr	Ser	Lys
	130					135					140				
Pro	Ser	Met	Thr	Leu	Glu	Pro	Asn	Lys	Asp	Leu	Arg	Pro	Gly	Asp	Thr
145					150					155				160	
Val	Thr	Ile	Thr	Cys	Ser	Ser	Tyr	Arg	Gly	Tyr	Pro	Glu	Ala	Glu	Val
			165						170					175	
Phe	Trp	Gln	Asp	Gly	Gln	Gly	Val	Pro	Leu	Thr	Gly	Asn	Val	Thr	Thr
		180					185						190		
Ser	Gln	Met	Ala	Asn	Glu	Gln	Gly	Leu	Phe	Asp	Val	His	Ser	Val	Leu
	195						200					205			
Arg	Val	Val	Leu	Gly	Ala	Asn	Gly	Thr	Tyr	Ser	Cys	Leu	Val	Arg	Asn
	210					215					220				
Pro	Val	Leu	Gln	Gln	Asp	Ala	His	Gly	Ser	Val	Thr	Ile	Thr	Gly	Gln
225					230					235				240	
Pro	Met	Thr	Phe	Pro	Pro	Glu	Ala	Leu	Trp	Val	Thr	Val	Gly	Leu	Ser

245 250 255
 Val Cys Leu Ile Ala Leu Leu Val Ala Leu Ala Phe Val Cys Trp Arg
 260 265 270
 Lys Ile Lys Gln Ser Cys Glu Glu Asn Ala Gly Ala Glu Asp Gln
 275 280 285
 Asp Gly Glu Gly Glu Gly Ser Lys Thr Ala Leu Gln Pro Leu Lys His
 290 295 300
 Ser Asp Ser Lys Glu Asp Asp Gly Gln Glu Ile Ala
 305 310 315

<210> 2
 <211> 951
 <212> DNA
 <213> Homo sapiens

<400> 2
 atgctgcgtc ggccggggcag ccttggcatg ggtgtgcatg tgggtgcagc cctgggagca 60
 ctgtggttct gcttcacagg agccttggag gtccaggtcc ctgaagaccc agtggtggca 120
 ctggtgggca ccgatgccac cctgtgctgc tctttctccc ctgagcctgg cttaagcctg 180
 gcacagctca acctcatctg gcagctgaca gataccaaac agctggtgca cagctttgct 240
 gagggccagg accagggcag cgcctatgcc aaccgcacgg cctcttccc ggacctgctg 300
 gcacagggca acgcatccct gaggtgctgag cgcgtgctg tggcggacga gggcagcttc 360
 acctgcttcg tgagcatccg ggatttcggc agcgtgctg tcagcctgca ggtggccgct 420
 cctactega agcccagcat gaccctggag cccaacaagg acctgcggcc aggggacacg 480
 gtgaccatca cgtgctccag ctaccggggc taccctgagg ctgaggtgtt ctggcaggat 540
 gggcaggggtg tgccctgac tggcaacgtg accacgtcgc agatggccaa cgagcagggc 600
 ttgtttgatg tgcacagcgt cctgcgggtg gtgctgggtg cgaatggcac ctacagctgc 660
 ctggtgcgca acccctgctg gcagcaggat gcgcacggct ctgtcaccat cacagggcag 720
 cctatgacat tccccccaga ggccctgtgg gtgaccgtgg ggctgtctgt ctgtctcatt 780
 gcactgctgg tggccctggc ttctgtgtgc tggagaaaaga tcaaacagag ctgtgaggag 840
 gagaatgcag gagctgagga ccaggatggg gagggagaag gctccaagac agccctgcag 900
 cctctgaaac actctgacag caaagaagat gatggacaag aaatagcctg a 951

<210> 3
 <211> 316
 <212> PRT
 <213> Homo sapiens

<400> 3
 Met Leu Arg Arg Arg Gly Ser Pro Gly Met Gly Val His Val Gly Ala
 1 5 10 15
 Ala Leu Gly Ala Leu Trp Phe Cys Leu Thr Gly Ala Leu Glu Val Gln
 20 25 30
 Val Pro Glu Asp Pro Val Val Ala Leu Val Gly Thr Asp Ala Thr Leu
 35 40 45
 Cys Cys Ser Phe Ser Pro Glu Pro Gly Phe Ser Leu Ala Gln Leu Asn
 50 55 60
 Leu Ile Trp Gln Leu Thr Asp Thr Lys Gln Leu Val His Ser Phe Ala
 65 70 75 80
 Glu Gly Gln Asp Gln Gly Ser Ala Tyr Ala Asn Arg Thr Ala Leu Phe
 85 90 95
 Pro Asp Leu Leu Ala Gln Gly Asn Ala Ser Leu Arg Leu Gln Arg Val
 100 105 110
 Arg Val Ala Asp Glu Gly Ser Phe Thr Cys Phe Val Ser Ile Arg Asp
 115 120 125
 Phe Gly Ser Ala Ala Val Ser Leu Gln Val Ala Ala Pro Tyr Ser Lys
 130 135 140

Pro Ser Met Thr Leu Glu Pro Asn Lys Asp Leu Arg Pro Gly Asp Thr
 145 150 155 160
 Val Thr Ile Thr Cys Pro Ser Tyr Arg Gly Tyr Pro Glu Ala Glu Val
 165 170 175
 Phe Trp Gln Asp Gly Gln Gly Val Pro Leu Thr Gly Asn Val Thr Thr
 180 185 190
 Ser Gln Met Ala Asn Glu Gln Gly Leu Phe Asp Val His Ser Val Leu
 195 200 205
 Arg Val Val Leu Gly Ala Asn Gly Thr Tyr Ser Cys Leu Val Arg Asn
 210 215 220
 Pro Val Leu Gln Gln Asp Ala His Gly Ser Val Thr Ile Thr Gly Gln
 225 230 235 240
 Pro Met Thr Phe Pro Pro Glu Ala Leu Trp Val Thr Val Gly Leu Ser
 245 250 255
 Val Cys Leu Ile Ala Leu Leu Val Ala Leu Ala Phe Val Cys Trp Arg
 260 265 270
 Lys Ile Lys Gln Ser Cys Glu Glu Glu Asn Ala Gly Ala Glu Asp Gln
 275 280 285
 Asp Gly Glu Gly Glu Gly Ser Lys Thr Ala Leu Gln Pro Leu Lys His
 290 295 300
 Ser Asp Ser Lys Glu Asp Asp Gly Gln Glu Ile Ala
 305 310 315

<210> 4
 <211> 951
 <212> DNA
 <213> Homo sapiens

<400> 4
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 ctgtggttct gcctcacagg agccctggag gtccagggtcc ctgaagaccc agtgggtggca 120
 ctggtgggca ccgatgccac cctgtgctgc tctttctccc ctgagcctgg ctccagcctg 180
 gcacagctca acctatctg gcagctgaca gataccaaac agctgggtgca cagctttgct 240
 gagggccagg accagggcag cgcctatgcc aaccgcacgg cctcttccc ggacctgctg 300
 gcacagggca acgcatccct gaggtgcag cgcgtgctg tggcggaaga gggcagcttc 360
 acctgcttcg tgagcatccg ggatttcggc agcgtgccc tcagcctgca ggtggccgct 420
 ccctactcga agcccagcat gaccctggag cccaacaagg acctgcggcc aggggacacg 480
 gtgacctca cgtgccccag ctaccggggc taccctgagg ctgaggtgtt ctggcaggat 540
 gggcagggtg tgccccagc tggcaacgtg accacgtgc agatggccaa cgagcagggc 600
 ttgtttgatg tgcacagcgt cctgcgggtg gtgctgggtg cgaatggcac ctacagctgc 660
 ctggtgcgca acccctgct gcagcaggat gcgcacggt ctgtcaccat cacagggcag 720
 cctatgacat tccccccaga ggccctgtgg gtgaccgtgg ggctgtctgt ctgtctcatt 780
 gactgctgg tggccctggc ttctgtgtgc tggagaaaga tcaaacagag ctgtgaggag 840
 gagaatgcag gagctgagga ccaggatggg gagggagaag gctccaagac agccctgcag 900
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<210> 5
 <211> 282
 <212> PRT
 <213> Homo sapiens

<400> 5
 Met Ala Ser Leu Gly Gln Ile Leu Phe Trp Ser Ile Ile Ser Ile Ile
 1 5 10 15
 Ile Ile Leu Ala Gly Ala Ile Ala Leu Ile Ile Gly Phe Gly Ile Ser
 20 25 30
 Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala Gly Asn Ile

35	40	45
Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro Asp Ile Lys Leu		
50	55	60
Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly Val Leu Gly Leu Val		
65	70	75
His Glu Phe Lys Glu Gly Lys Asp Glu Leu Ser Glu Gln Asp Glu Met		
85	90	95
Phe Arg Gly Arg Thr Ala Val Phe Ala Asp Gln Val Ile Val Gly Asn		
100	105	110
Ala Ser Leu Arg Leu Lys Asn Val Gln Leu Thr Asp Ala Gly Thr Tyr		
115	120	125
Lys Cys Tyr Ile Ile Thr Ser Lys Gly Lys Gly Asn Ala Asn Leu Glu		
130	135	140
Tyr Lys Thr Gly Ala Phe Ser Met Pro Glu Val Asn Val Asp Tyr Asn		
145	150	155
Ala Ser Ser Glu Thr Leu Arg Cys Glu Ala Pro Arg Tip Phe Pro Gln		
165	170	175
Pro Thr Val Val Trp Ala Ser Gln Val Asp Gln Gly Ala Asn Phe Ser		
180	185	190
Glu Val Ser Asn Thr Ser Phe Glu Leu Asn Ser Glu Asn Val Thr Met		
195	200	205
Lys Val Val Ser Val Leu Tyr Asn Val Thr Ile Asn Asn Thr Tyr Ser		
210	215	220
Cys Met Ile Glu Asn Asp Ile Ala Lys Ala Thr Gly Asp Ile Lys Val		
225	230	235
Thr Glu Ser Glu Ile Lys Arg Arg Ser His Leu Gln Leu Leu Asn Ser		
245	250	255
Lys Ala Ser Leu Cys Val Ser Ser Phe Phe Ala Ile Ser Trp Ala Leu		
260	265	270
Leu Pro Leu Ser Pro Tyr Leu Met Leu Lys		
275	280	

<210> 6
 <211> 849
 <212> DNA
 <213> Homo sapiens

<400> 6	
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ggagcaattg cactcatcat tggcttttgt atttcaggga gacactccat cacagtcact	120
actgtcgcc cagctgggaa cattggggag gatggaatcc tgagctgcac ttttgaacct	180
gacatcaaac tttctgatat cgtgatacaa tggctgaagg aagggtgttt aggcttggtc	240
catgagttca aagaaggcaa agatgagctg tcggagcagg atgaaatgtt cagaggccgg	300
acagcagtgt ttgctgatca agtgatagtt ggcaatgcct ctttgcggct gaaaaacgtg	360
caactcacag atgctggcac ctacaaatgt tatatcatca cttctaaagg caaggggaat	420
gctaaccttg agtataaaac tggagccttc agcatgccgg aagtgaatgt ggactataat	480
gccagctcag agaccttgcg gtgtgaggct ccccgatggt tccccagcc cacagtggtc	540
tgggcatccc aagttgacca gggagccaac ttctcggaag tctccaatac cagctttgag	600
ctgaactctg agaatgtgac catgaagggt gtgtctgtgc tctacaatgt tacgatcaac	660
aacacatact cctgtatgat tgaaaatgac attgccaaag caacagggga tatcaaagtg	720
acagaatcgg agatcaaaag gcggagtcac ctacagctgc taaactcaaa ggcttctctg	780
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ctaaaataa	849

<210> 7
 <211> 25
 <212> PRT

<213> Homo sapiens

<400> 7

Met Ala Ile Ser Gly Val Pro Val Leu Gly Phe Phe Ile Ile Ala Val
 1 5 10 15
 Leu Met Ser Ala Gln Glu Ser Trp Ala
 20 25

<210> 8

<211> 5

<212> PRT

<213> Bos taurus

<400> 8

Lys Phe Glu Arg Gln
 1 5

<210> 9

<211> 15

<212> PRT

<213> Homo sapiens

<400> 9

Met Asp Asp Gln Arg Asp Leu Ile Ser Asn Asn Glu Gln Leu Pro
 1 5 10 15

<210> 10

<211> 4

<212> PRT

<213> Rattus norvegicus

<400> 10

Lys Asp Glu Leu
 1

<210> 11

<211> 241

<212> PRT

<213> Homo sapiens

<400> 11

Leu Arg Ala Asp Thr Gln Glu Lys Glu Val Arg Ala Met Val Gly Ser
 1 5 10 15
 Asp Val Glu Leu Ser Cys Ala Cys Pro Glu Gly Ser Arg Phe Asp Leu
 20 25 30
 Asn Asp Val Tyr Val Tyr Trp Gln Thr Ser Glu Ser Lys Thr Val Val
 35 40 45
 Thr Tyr His Ile Pro Gln Asn Ser Ser Leu Glu Asn Val Asp Ser Arg
 50 55 60
 Tyr Arg Asn Arg Ala Leu Met Ser Pro Ala Gly Met Leu Arg Gly Asp
 65 70 75 80
 Phe Ser Leu Arg Leu Phe Asn Val Thr Pro Gln Asp Glu Gln Lys Phe
 85 90 95
 His Cys Leu Val Leu Ser Gln Ser Leu Gly Phe Gln Glu Val Leu Ser
 100 105 110
 Ile Glu Val Thr Leu His Val Ala Ala Asn Phe Ser Val Pro Val Val
 115 120 125

Ser Ala Pro His Ser Pro Ser Gln Asp Glu Leu Thr Phe Thr Cys Thr
 130 135 140
 Ser Ile Asn Gly Tyr Pro Arg Pro Asn Val Tyr Trp Ile Asn Lys Thr
 145 150 155 160
 Asp Asn Ser Leu Leu Asp Gln Ala Leu Gln Asn Asp Thr Val Phe Leu
 165 170 175
 Asn Met Arg Gly Leu Tyr Asp Val Val Ser Val Leu Arg Ile Ala Arg
 180 185 190
 Thr Pro Ser Val Asn Ile Gly Cys Cys Ile Glu Asn Val Leu Leu Gln
 195 200 205
 Gln Asn Leu Thr Val Gly Ser Gln Thr Gly Asn Asp Ile Gly Glu Arg
 210 215 220
 Asp Lys Ile Thr Glu Asn Pro Val Ser Thr Gly Glu Lys Asn Ala Ala
 225 230 235 240
 Thr

<210> 12
 <211> 24
 <212> PRT
 <213> Homo sapiens

<400> 12
 Tyr Ser Lys Pro Ser Met Thr Leu Glu Pro Asn Lys Asp Leu Arg Pro
 1 5 10 15
 Gly Asp Thr Val Thr Ile Thr Cys
 20

<210> 13
 <211> 24
 <212> PRT
 <213> Homo sapiens

<400> 13
 Ser Ser Tyr Arg Gly Tyr Pro Glu Ala Glu Val Phe Trp Gln Asp Gly
 1 5 10 15
 Gln Gly Val Pro Leu Thr Gly Asn
 20

<210> 14
 <211> 25
 <212> PRT
 <213> Homo sapiens

<400> 14
 Arg Asn Pro Val Leu Gln Gln Asp Ala His Gly Ser Val Thr Ile Thr
 1 5 10 15
 Gly Gln Pro Met Thr Phe Pro Pro Glu
 20 25

<210> 15
 <211> 288
 <212> PRT
 <213> Homo sapiens

<400> 15
 Met Gly His Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr

1 5 10 15
 Leu Asn Phe Phe Gln Leu Leu Val Leu Ala Gly Leu Ser His Phe Cys
 20 25 30
 Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu
 35 40 45
 Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile
 50 55 60
 Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp
 65 70 75 80
 Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr
 85 90 95
 Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
 100 105 110
 Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg
 115 120 125
 Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr
 130 135 140
 Pro Ser Ile Ser Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile
 145 150 155 160
 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu
 165 170 175
 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp
 180 185 190
 Pro Glu Thr Glu Leu Tyr Ala Val Ser Ser Lys Leu Asp Phe Asn Met
 195 200 205
 Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg
 210 215 220
 Val Asn Gln Thr Phe Asn Trp Asn Thr Thr Lys Gln Glu His Phe Pro
 225 230 235 240
 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly
 245 250 255
 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg
 260 265 270
 Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val
 275 280 285

<210> 16
 <211> 323
 <212> PRT
 <213> Homo sapiens

<400> 16
 Met Gly Leu Ser Asn Ile Leu Phe Val Met Ala Phe Leu Leu Ser Gly
 1 5 10 15
 Ala Ala Pro Leu Lys Ile Gln Ala Tyr Phe Asn Glu Thr Ala Asp Leu
 20 25 30
 Pro Cys Gln Phe Ala Asn Ser Gln Asn Gln Ser Leu Ser Glu Leu Val
 35 40 45
 Val Phe Trp Gln Asp Gln Glu Asn Leu Val Leu Asn Glu Val Tyr Leu
 50 55 60
 Gly Lys Glu Lys Phe Asp Ser Val His Ser Lys Tyr Met Gly Arg Thr
 65 70 75 80
 Ser Phe Asp Ser Asp Ser Trp Thr Leu Arg Leu His Asn Leu Gln Ile
 85 90 95
 Lys Asp Lys Gly Leu Tyr Gln Cys Ile Ile His His Lys Lys Pro Thr
 100 105 110
 Gly Met Ile Arg Ile His Gln Met Asn Ser Glu Leu Ser Val Leu Ala

115	120	125
Asn Phe Ser Gln Pro Glu Ile Val Pro Ile Ser Asn Ile Thr Glu Asn		
130	135	140
Val Tyr Ile Asn Leu Thr Cys Ser Ser Ile His Gly Tyr Pro Glu Pro		
145	150	155
Lys Lys Met Ser Val Leu Leu Arg Thr Lys Asn Ser Thr Ile Glu Tyr		160
	165	170
Asp Gly Ile Met Gln Lys Ser Gln Asp Asn Val Thr Glu Leu Tyr Asp		175
	180	185
Val Ser Ile Ser Leu Ser Val Ser Phe Pro Asp Val Thr Ser Asn Met		190
	195	200
Thr Ile Phe Cys Ile Leu Glu Thr Asp Lys Thr Arg Leu Leu Ser Ser		205
	210	215
Pro Phe Ser Ile Glu Leu Glu Asp Pro Gln Pro Pro Pro Asp His Ile		220
225	230	235
Pro Trp Ile Thr Ala Val Leu Pro Thr Val Ile Ile Cys Val Met Val		240
	245	250
Phe Cys Leu Ile Leu Trp Lys Trp Lys Lys Lys Lys Arg Pro Arg Asn		255
	260	265
Ser Tyr Lys Cys Gly Thr Asn Thr Met Glu Arg Glu Glu Ser Glu Gln		270
	275	280
Thr Lys Lys Arg Glu Lys Ile His Ile Pro Glu Arg Ser Asp Glu Ala		285
	290	295
Gln Arg Val Phe Lys Ser Ser Lys Thr Ser Ser Cys Asp Lys Ser Asp		300
305	310	315
Thr Cys Phe		320

<210> 17
 <211> 290
 <212> PRT
 <213> Homo sapiens

<400> 17

Met Arg Ile Phe Ala Val Phe Ile Phe Met Thr Tyr Trp His Leu Leu	
1	5
Asn Ala Phe Thr Val Thr Val Pro Lys Asp Leu Tyr Val Val Glu Tyr	10
	20
Gly Ser Asn Met Thr Ile Glu Cys Lys Phe Pro Val Glu Lys Gln Leu	25
	30
	35
Asp Leu Ala Ala Leu Ile Val Tyr Trp Glu Met Glu Asp Lys Asn Ile	40
	45
	50
Ile Gln Phe Val His Gly Glu Glu Asp Leu Lys Val Gln His Ser Ser	55
65	60
	65
Tyr Arg Gln Arg Ala Arg Leu Leu Lys Asp Gln Leu Ser Leu Gly Asn	70
	75
	80
	85
Ala Ala Leu Gln Ile Thr Asp Val Lys Leu Gln Asp Ala Gly Val Tyr	90
	95
	100
Arg Cys Met Ile Ser Tyr Gly Gly Ala Asp Tyr Lys Arg Ile Thr Val	105
	110
	115
Lys Val Asn Ala Pro Tyr Asn Lys Ile Asn Gln Arg Ile Leu Val Val	120
	125
	130
Asp Pro Val Thr Ser Glu His Glu Leu Thr Cys Gln Ala Glu Gly Tyr	135
145	140
	145
Pro Lys Ala Glu Val Ile Trp Thr Ser Ser Asp His Gln Val Leu Ser	150
	155
	160
	165
Gly Lys Thr Thr Thr Thr Asn Ser Lys Arg Glu Glu Lys Leu Phe Asn	170
	175
	180
	185
	190

Val Thr Ser Thr Leu Arg Ile Asn Thr Thr Thr Asn Glu Ile Phe Tyr
 195 200 205
 Cys Thr Phe Arg Arg Leu Asp Pro Glu Glu Asn His Thr Ala Glu Leu
 210 215 220
 Val Ile Pro Glu Leu Pro Leu Ala His Pro Pro Asn Glu Arg Thr His
 225 230 235 240
 Leu Val Ile Leu Gly Ala Ile Leu Leu Cys Leu Gly Val Ala Leu Thr
 245 250 255
 Phe Ile Phe Arg Leu Arg Lys Gly Arg Met Met Asp Val Lys Lys Cys
 260 265 270
 Gly Ile Gln Asp Thr Asn Ser Lys Lys Gln Ser Asp Thr His Leu Glu
 275 280 285
 Glu Thr
 290

<210> 18
 <211> 302
 <212> PRT
 <213> Homo sapiens

<400> 18
 Met Arg Leu Gly Ser Pro Gly Leu Leu Phe Leu Leu Phe Ser Ser Leu
 1 5 10 15
 Arg Ala Asp Thr Gln Glu Lys Glu Val Arg Ala Met Val Gly Ser Asp
 20 25 30
 Val Glu Leu Ser Cys Ala Cys Pro Glu Gly Ser Arg Phe Asp Leu Asn
 35 40 45
 Asp Val Tyr Val Tyr Trp Gln Thr Ser Glu Ser Lys Thr Val Val Thr
 50 55 60
 Tyr His Ile Pro Gln Asn Ser Ser Leu Glu Asn Val Asp Ser Arg Tyr
 65 70 75 80
 Arg Asn Arg Ala Leu Met Ser Pro Ala Gly Met Leu Arg Gly Asp Phe
 85 90 95
 Ser Leu Arg Leu Phe Asn Val Thr Pro Gln Asp Glu Gln Lys Phe His
 100 105 110
 Cys Leu Val Leu Ser Gln Ser Leu Gly Phe Gln Glu Val Leu Ser Ile
 115 120 125
 Glu Val Thr Leu His Val Ala Ala Asn Phe Ser Val Pro Val Val Ser
 130 135 140
 Ala Pro His Ser Pro Ser Gln Asp Glu Leu Thr Phe Thr Cys Thr Ser
 145 150 155 160
 Ile Asn Gly Tyr Pro Arg Pro Asn Val Tyr Trp Ile Asn Lys Thr Asp
 165 170 175
 Asn Ser Leu Leu Asp Gln Ala Leu Gln Asn Asp Thr Val Phe Leu Asn
 180 185 190
 Met Arg Gly Leu Tyr Asp Val Val Ser Val Leu Arg Ile Ala Arg Thr
 195 200 205
 Pro Ser Val Asn Ile Gly Cys Cys Ile Glu Asn Val Leu Leu Gln Gln
 210 215 220
 Asn Leu Thr Val Gly Ser Gln Thr Gly Asn Asp Ile Gly Glu Arg Asp
 225 230 235 240
 Lys Ile Thr Glu Asn Pro Val Ser Thr Gly Glu Lys Asn Ala Ala Thr
 245 250 255
 Trp Ser Ile Leu Ala Val Leu Cys Leu Leu Val Val Val Ala Val Ala
 260 265 270
 Ile Gly Trp Val Cys Arg Asp Arg Cys Leu Gln His Ser Tyr Ala Gly
 275 280 285

Ala Trp Ala Val Ser Pro Glu Thr Glu Leu Thr Gly His Val
 290 295 300

<210> 19
 <211> 227
 <212> PRT
 <213> Homo sapiens

<400> 19
 Ile Ser Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala Gly
 1 5 10 15
 Asn Ile Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro Asp Ile
 20 25 30
 Lys Leu Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly Val Leu Gly
 35 40 45
 Leu Val His Glu Phe Lys Glu Gly Lys Asp Glu Leu Ser Glu Gln Asp
 50 55 60
 Glu Met Phe Arg Gly Arg Thr Ala Val Phe Ala Asp Gln Val Ile Val
 65 70 75 80
 Gly Asn Ala Ser Leu Arg Leu Lys Asn Val Gln Leu Thr Asp Ala Gly
 85 90 95
 Thr Tyr Lys Cys Tyr Ile Ile Thr Ser Lys Gly Lys Gly Asn Ala Asn
 100 105 110
 Leu Glu Tyr Lys Thr Gly Ala Phe Ser Met Pro Glu Val Asn Val Asp
 115 120 125
 Tyr Asn Ala Ser Ser Glu Thr Leu Arg Cys Glu Ala Pro Arg Trp Phe
 130 135 140
 Pro Gln Pro Thr Val Val Trp Ala Ser Gln Val Asp Gln Gly Ala Asn
 145 150 155 160
 Phe Ser Glu Val Ser Asn Thr Ser Phe Glu Leu Asn Ser Glu Asn Val
 165 170 175
 Thr Met Lys Val Val Ser Val Leu Tyr Asn Val Thr Ile Asn Asn Thr
 180 185 190
 Tyr Ser Cys Met Ile Glu Asn Asp Ile Ala Lys Ala Thr Gly Asp Ile
 195 200 205
 Lys Val Thr Glu Ser Glu Ile Lys Arg Arg Ser His Leu Gln Leu Leu
 210 215 220
 Asn Ser Lys
 225

<210> 20
 <211> 215
 <212> PRT
 <213> Homo sapiens

<400> 20
 Gln Val Pro Glu Asp Pro Val Val Ala Leu Val Gly Thr Asp Ala Thr
 1 5 10 15
 Leu Cys Cys Ser Phe Ser Pro Glu Pro Gly Phe Ser Leu Ala Gln Leu
 20 25 30
 Asn Leu Ile Trp Gln Leu Thr Asp Thr Lys Gln Leu Val His Ser Phe
 35 40 45
 Ala Glu Gly Gln Asp Gln Gly Ser Ala Tyr Ala Asn Arg Thr Ala Leu
 50 55 60
 Phe Pro Asp Leu Leu Ala Gln Gly Asn Ala Ser Leu Arg Leu Gln Arg
 65 70 75 80
 Val Arg Val Ala Asp Glu Gly Ser Phe Thr Cys Phe Val Ser Ile Arg

			85				90				95				
Asp	Phe	Gly	Ser	Ala	Ala	Val	Ser	Leu	Gln	Val	Ala	Ala	Pro	Tyr	Ser
			100				105				110				
Lys	Pro	Ser	Met	Thr	Leu	Glu	Pro	Asn	Lys	Asp	Leu	Arg	Pro	Gly	Asp
			115				120				125				
Thr	Val	Thr	Ile	Thr	Cys	Pro	Ser	Tyr	Arg	Gly	Tyr	Pro	Glu	Ala	Glu
			130				135				140				
Val	Phe	Trp	Gln	Asp	Gly	Gln	Gly	Val	Pro	Leu	Thr	Gly	Asn	Val	Thr
145			150				155				160				
Thr	Ser	Gln	Met	Ala	Asn	Glu	Gln	Gly	Leu	Phe	Asp	Val	His	Ser	Val
			165				170				175				
Leu	Arg	Val	Val	Leu	Gly	Ala	Asn	Gly	Thr	Tyr	Ser	Cys	Leu	Val	Arg
			180				185				190				
Asn	Pro	Val	Leu	Gln	Gln	Asp	Ala	His	Gly	Ser	Val	Thr	Ile	Thr	Gly
195			200				205								
Gln	Pro	Met	Thr	Phe	Pro	Pro									
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Gln Ala Tyr Phe Asn Glu Thr Ala Asp Leu Pro Cys Gln Phe Ala Asn
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 Ser Gln Asn Gln Ser Leu Ser Glu Leu Val Val Phe Trp Gln Asp Gln
 20 25 30
 Glu Asn Leu Val Leu Asn Glu Val Tyr Leu Gly Lys Glu Lys Phe Asp
 35 40 45
 Ser Val His Ser Lys Tyr Met Gly Arg Thr Ser Phe Asp Ser Asp Ser
 50 55 60
 Trp Thr Leu Arg Leu His Asn Leu Gln Ile Lys Asp Lys Gly Leu Tyr
 65 70 75 80
 Gln Cys Ile Ile His His Lys Lys Pro Thr Gly Met Ile Arg Ile His
 85 90 95
 Gln Met Asn Ser Glu Leu Ser Val Leu Ala Asn Phe Ser Gln Pro Glu
 100 105 110
 Ile Val Pro Ile Ser Asn Ile Thr Glu Asn Val Tyr Ile Asn Leu Thr
 115 120 125
 Cys Ser Ser Ile His Gly Tyr Pro Glu Pro Lys Lys Met Ser Val Leu
 130 135 140
 Leu Arg Thr Lys Asn Ser Thr Ile Glu Tyr Asp Gly Ile Met Gln Lys
 145 150 155 160
 Ser Gln Asp Asn Val Thr Glu Leu Tyr Asp Val Ser Ile Ser Leu Ser
 165 170 175
 Val Ser Phe Pro Asp Val Thr Ser Asn Met Thr Ile Phe Cys Ile Leu
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 Glu Thr Asp Lys Thr Arg Leu Leu Ser Ser Pro Phe Ser Ile Glu Leu
 195 200 205
 Glu Asp Pro Gln Pro Pro Pro Asp His Ile Pro
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<212> PRT

<213> Homo sapiens

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Val Thr Val Pro Lys Asp Leu Tyr Val Val Glu Tyr Gly Ser Asn Met
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 Thr Ile Glu Cys Lys Phe Pro Val Glu Lys Gln Leu Asp Leu Ala Ala
 20 25 30
 Leu Ile Val Tyr Trp Glu Met Glu Asp Lys Asn Ile Ile Gln Phe Val
 35 40 45
 His Gly Glu Glu Asp Leu Lys Val Gln His Ser Ser Tyr Arg Gln Arg
 50 55 60
 Ala Arg Leu Leu Lys Asp Gln Leu Ser Leu Gly Asn Ala Ala Leu Gln
 65 70 75 80
 Ile Thr Asp Val Lys Leu Gln Asp Ala Gly Val Tyr Arg Cys Met Ile
 85 90 95
 Ser Tyr Gly Gly Ala Asp Tyr Lys Arg Ile Thr Val Lys Val Asn Ala
 100 105 110
 Pro Tyr Asn Lys Ile Asn Gln Arg Ile Leu Val Val Asp Pro Val Thr
 115 120 125
 Ser Glu His Glu Leu Thr Cys Gln Ala Glu Gly Tyr Pro Lys Ala Glu
 130 135 140

Val	Ile	Trp	Thr	Ser	Ser	Asp	His	Gln	Val	Leu	Ser	Gly	Lys	Thr	Thr
145					150					155					160
Thr	Thr	Asn	Ser	Lys	Arg	Glu	Glu	Lys	Leu	Phe	Asn	Val	Thr	Ser	Thr
				165					170						175
Leu	Arg	Ile	Asn	Thr	Thr	Thr	Asn	Glu	Ile	Phe	Tyr	Cys	Thr	Phe	Arg
			180					185					190		
Arg	Leu	Asp	Pro	Glu	Glu	Asn	His	Thr	Ala	Glu	Leu	Val	Ile	Pro	Glu
		195					200					205			
Leu	Pro	Leu	Ala	His	Pro	Pro	Asn	Glu	Arg	Thr	His				
210						215					220				